

SLIDEKAMERA

NEXT LEVEL OF FILMMAKING



AION™ IQ

CONTROLLER



User Manual

pdf version of the manual available for download: www.slidekamera.com

TIP

On the margins you will find information, which complement the contents of the manual.

They are not essential for the correct operation of the device, but you might find them useful.

Before you start your work with the controller **SLIDEAION™ IQ** we strongly recommend to read the manual carefully.

Please note that using the controller in a manner inconsistent with the instructions, any unauthorized repair attempts or any kind of modification of the device can cause a damage the manufacturer is not responsible for.

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1. AION™ IQ controller

Front panel of the controller is equipped a joystick and two knobs to adjust: SPEED and DAMPING. SPEED knob allows to adjust speed range, whereas DAMPING knob regulates smooth acceleration and deceleration of movement, ie. the user can adjust the time at which the drive reaches the desired speed or stops. RJ-45 cable socket and power switch are located on the upper wall of the controller housing. Joystick, placed in the centre of the front panel, enables user friendly programming, controlling and configuration. Simple and functional menu provides the ergonomics of operation. AION™ IQ controller is equipped with 1/4" mounting hole that allows to attach it to slider cart, for example, using Slidekamera VARIO™ Magic arm 8" or 11".

- [1] Power switch
- [2] RJ-45 cable socket
- [3] LCD display
- [4] SPEED knob
- [5] DAMPING knob
- [6] Joystick
- [7] 1/4" mounting hole



2. How to operate the AION™ IQ controller

IMPORTANT!

Before the first use of the drive it is necessary to perform automatic calibration of the driving motor. This step is necessary for the drive to function properly and cannot be neglected. Automatic calibration is performed only before the first use, it determines the range of movement for your X™SLIDER.

After you switch the power on the startup screen will appear on LCD for about 1,5s.

2.1. Specifying startup parameters

After switching the power on it is necessary to determine the working mode of the drive. We differentiate three types of modes: **AUTO**, **MAN** i **FREE**.

AUTO - basic automatic calibration. The drive automatically moves to the reference point. Movement range corresponds to the one specified during the automatic calibration.

MAN - the user determines the reference points (hence the movement range) by using the joystick and the SPEED knob.

FREE - this mode does not require setting any movement range. Not recommended when working with X™SLIDER.

2.1.1. AUTO (basic automatic calibration)

In case of **AUTO** working mode, after switching the power, a message will appear on LCD screen:

AUTO Referencing
← or → to run

Driver ready
press OK

Use the joystick to determine the direction of the movement so that the drive can automatically set the reference points. As soon as the drive determines the points there is a message on LCD that the drive is ready for work. After pressing OK (understood as pressing the joystick) the main menu appears on the screen.

IMPORTANT!

When setting points of reference in **MAN** mode exercise extreme caution so that the cart does not hit the side feet of your X™SLIDER.

2.1.2. MAN (manual calibration)

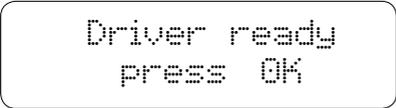
In case of **MAN** working mode, the controller moves to the manual calibration. This mode allows to determine the reference points anywhere on X™SLIDER rail, not necessarily at the ends. This mode is recommended if you need to determine a short range of motion for the cart.

Message on the screen requires the user to determine points of reference. By moving the joystick right and left set the reference points for the drive. Use SPEED knob to determine the speed of the cart, this will allow you to decelerate before the cart reaches second point of reference. Press the joystick to accept.

Set 1st RefPoint
← → & press OK

Set 2nd RefPoint
← → & press OK

As soon as the user sets the reference points, a message on LCD appears that the drive is ready for work. After pressing OK (understood as pressing the joystick) the main menu appears on the screen.



Driver ready
press OK

2.1.3. FREE (no limits)

In case of FREE working mode, there are no limits as to the movement range. FREE Mode does not require setting any reference points. The driver is immediately ready to work.

2.2. Main menu

As soon as the startup parameters are determined the controller enters a main menu with working programs and additional CONFIG menu. Navigate by moving joystick up and down. Sign „ > “ „ < “, indicates selected choice. Press the joystick to enter selected program. Main menu features four entries: „VIDEO“, „ANIMATION“, „TIMELAPSE“ and „CONFIG“.

2.2.1. Menu CONFIG

After entering [Info] there will be information about the voltage: Vin, and range of motion for the cart determined during initial calibration L.



ANIMATION
> CONFIG <

CONFIG menu has five entries [Info], Power, Backlight, [Calibration] and <Back>. The list boxes in square brackets [] indicate functions generating own screen. In order to activate them, press the joystick. At the end of each submenu there is „<Back>“. Pressing the joystick in this field results in returning to the main menu. The remaining fields of the submenu are the parameters, next is the value of the parameter. To change the value move the joystick right or left.

Power- driving motor power: In case of X-GEAR it is 100% with not change possibility.

Back Light - adjusts the brightness of the LCD. By moving the joystick left or right you can set the brightness within the range of: 10-100%w zakresie od 10-100%

[Calibration] - driving motor automatic calibration described in point 2.1.1 of the manual

<Back> - return to main menu

◀ IMPORTANT!

When working with the drive in FREE Mode exercise extreme caution. Lack of reference points increases the risk of the cart hitting the side feet. It may cause damage of the equipment.

IMPORTANT!



If the backlight of the LCD screen starts flashing and there will be an orange flashing light under FAULT marking on the right socket of the driving motor, the user is informed about existing error. In such situation, immediately enter CONFIG menu → [Info]. Information about the error should appear in the upper right corner of the screen.

```
Vin=9.8V    V
L 1276.1mm
```

V : means that the battery voltage is too low. Replace the battery immediately in order to avoid to a sudden stop of the drive, which may result in damage to the equipment.

t : (Thermal Warning) indicates temperature warning. Turn off the drive immediately so as not to overheat the driving motor.

T : (Thermal Shutdown) indicates emergency drive shutdown due to overheating. You should immediately turn off the drive and wait until FAULT light switches off.

2.2.1.1. Driving motor automatic calibration

Please note that automatic calibration is only possible when working with the slider. After selecting [Calibration] from „CONFIG“ menu a message appears on LCD:

```
CALIBRATION
<- or -> to run
```

```
CALIBRATION
in progress
```

Use the joystick to determine the direction of the movement so that the drive can automatically set the reference points.

```
CALIBRATION
L 1276.1mm
```

After the automatic calibration is performed there will be a message on the screen displaying the length of motion range for the cart for your X™SLIDER. **After the power is turned off the information is stored in the controller so there is no need to repeat the procedure until you mount the drive on a slider of a different length.**

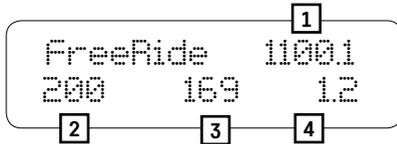
2.2.2. VIDEO

As you enter VIDEO program, a submenu will appear on the screen with different operating modes: [Free Ride], [Recording], [Play-back], [VideoLoop], <Back>.”

```
> VIDEO <
TIMELAPSE
```

2.2.2.1. Free Ride

Free Ride mode allows the user to control the speed of the cart using joystick and adjusting knobs. **SPEED** knob sets the maximum speed desired by the user. **DAMPING** knob is used to determine the time at which the drive reaches the desired speed or stops, what allows to achieve very smooth acceleration and deceleration of the cart. By moving the joystick right or left you can control the level of acceleration/deceleration of the cart. Pressing the joystick causes the driving motor to stop immediately and the controller returns to **VIDEO** menu.



Current position of the cart, measured in mm [1]

Maximum speed of the cart set by the user [2]

Currently set speed [3]

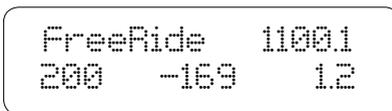
Acceleration / deceleration time [4]

When you work in Free Ride mode you can change **SPEED** and **DAMPING** parameters at any time during the movement. **SPEED** knob allows to set the speed value within the range of 2 -200mm/s. **DAMPING** knob allows to set the acceleration/deceleration time within the range from 0.1s to 10s. Sample screen presented above informs that the maximum speed of the cart is set on 200mm /s [2] , the currently set speed of the cart is 169mm/s [3]. The value is 1.2 [4] , means that the maximum speed will be achieved after 1.2 seconds.

Please note that depending on the chosen method of calibration the current position of the cart is measured and presented on the screen in a different way. The table below illustrates and explains the messages on the controller. The table refers to all modes and programs unless it is indicated otherwise in the manual.

The positioning of the cart for different calibration methods.

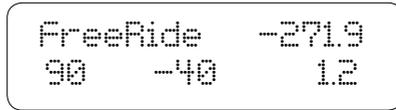
AUTO/MAN



Selecting **AUTO** or **MAN** for a calibration method, please note that the position of „0” means the left extreme point of reference. The value grows as the cart moves closer to the right extreme point of reference.

The direction of movement is indicated with currently set speed value. If the currently set speed is in the opposite direction it is marked with the sign „-”.

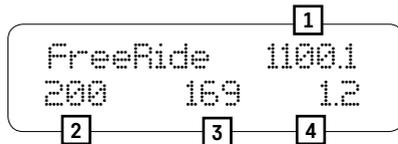
FREE Mode



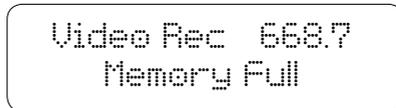
Selecting **FREE** Mode the user does not determine any reference points, therefore the position at which the cart stands at that moment is marked as „0” (starting point). From that starting point, any position to the left is determined as a negative number whereas any position to the right, as a positive number. The direction of movement is indicated with currently set speed value. If the currently set speed is in the opposite direction it is marked with the sign „-”.

2.2.2.2. Recording

Recording mode is designed to record the movements of cart in order to play it back later in **Playback** mode. Movement control (SPEED and DAMPING) is exactly the same as in **Free Ride** mode, so the user can change SPEED and DAMPING parameters at any time during the movement. In order to finish the recording and return to the menu press the joystick. The controller can store 59 seconds of the recording. Recorded movement is stored in the controller until the power supply is switched off.



- Current position of the cart, measured in mm [1]
- Maximum speed of the cart set by the user [2]
- Currently set speed [3]
- Acceleration / deceleration time [4]



If length of the recorded movement exceeds 59 seconds, a message on the screen will appear informing the user that the controller memory is full. To stop the recording before the end of 59 seconds, press the joystick. In order to play back the recorded movement, return to the main menu and enter Playback mode.

2.2.2.3. Playback

Playback pmode plays back movements of the cart saved in Recording mode. Once you enter Playback mode the screen displays information about the length of the recording or the lack of it.

[Recording]
> [Playback] 59s

Playback 00
No Records

When you select [Playback] there will be a message displayed on the screen: Go Home? . The controller requires the user decision whether the cart should return to the position where the recording of movement started (→ Y) or whether to start playing back the movement from the current position of the cart (N ←). Select the option by moving the joystick in the appropriate direction. You can return to VIDEO menu at any time by pressing the joystick.

Playback 590.2
Go Home? N← →Y

Playback 7267.4
press OK to Play

Playback 722.1 [1]
Time: 7/59s [2]

Playback 58.4
press OK to exit

The controller displays information about the current position of the cart [1] and the current/ overall time of the recording [2]. As the recorded movement stops press the joystick to return to VIDEO menu..

2.2.2.4. Video Loop

During VideoLoop mode the cart moves from one reference point to the other without stop. It automatically turns back and starts moving in the opposite direction once it reaches the end of the movement range. There is no need for the user to determine the direction of the movement. The user can change **SPEED** and **DAMPING** parameters at any time during the movement. **SPEED** knob allows to set the speed value of the cart [1]. **DAMPING** knob allows to set the acceleration/deceleration time [2]. Pressing the joystick causes the driving motor to stop immediately and the controller returns to VIDEO menu. **W In Vi-**

VidLoop 856.6
36 31
[1] [2]

deoLoop mode there is no „—” sign when the cart moves in the opposite direction.

Currently set speed of the cart [1]

Acceleration/deceleration time [2]

IMPORTANT!

If you selected FREE Mode when setting startup parameters it is important to remember that the drive has no reference points set. Consequently, it will move only in one direction and will not turn back. Use SPEED knob to adjust the speed of the cart paying special attention so it does not hit side feet of the slider.

2.2.3. TIMELAPSE

TIMELAPSE program is designed for interval shots synchronized with the movement of the cart (Motion Timelapse). Shutter release cable connected to the socket on driving motor enables to synchronize the drive with the camera. After entering TIMELAPSE program the user has to set the parameters below::

Mode – Continuous / SDS working mode
Direction – cart movement direction: left/right
Interval – time at which the drive takes a shot (1-600s)
Expos. – duration time of the trigger signal (from 0.1 to 99.9 s)
Shots – number of photos to take during the track (from 10 to 30 thousand). Time of the track is calculated automatically by the controller. It can be determined from the formula: Interval x Shots
[Start] – TIMELAPSE program starts
<Back> – controller returns to main menu

IMPORTANT!

Please note that it is important to select a proper direction of the movement in TIMELAPSE program.

If you choose movement direction as left and the cart will be located in the left reference point „0“, the device will encounter resistance as it is the end of its movement range. Consequently, the drive will not move.

In **Continuous** mode, the cart moves smoothly with a constant speed. In this case, there is no need to use the cable release attached to the driving motor (especially for short exposure times). The release time can be successfully set on the camera, or in the cable release with the interval function.

In **SDS mode (Shot Drive Shot)** the cart moves in steps between the points where you want to take photos.

The trigger signal, with a preset duration time (Expos.) is given to the next point before the cart moves. Shutter release cable connected to the socket on driving motor enables to synchronize the drive with the camera.

The distance that the drive covers during the track is calculated from the place where the cart is currently located, to the end of the range of movement in a set point direction (Direction).

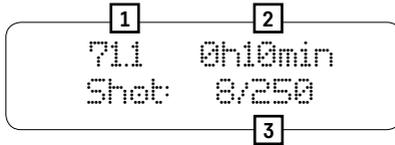
If specified startup parameters were: **AUTO** or **MAN** the controller will calculate automatically length of step for **SDS** mode and speed for **Continuous** mode. However, in **FREE** mode, due to the fact that no reference points were defined, after setting all parameters there would be an additional message on the controller screen asking the user to manually determine the length of step: 1 – 999mm.

In case of Continuous mode, once you start TIMELAPSE mode (by selecting [Start]), use SPEED knob to set the speed for the cart: 0.1 to 10 mm / s.

IMPORTANT!

he controller will set the maximum length of step for the drive depending on the time that is has for the movement (it is calculated from the formula: Interval-Exposure).

The sample screen presented below informs about the position of the cart on the slider rail [1]. There are 10 min left until the end of the track [2]. The drive has already taken eight photos out of two hundred and fifty photos set by the user [3]. The user can stop the program at any time by pressing the joystick for 2 seconds. When the drive has taken all the photos and stops the program there will be a message on the screen: Timelaps end OK to exit. Press the joystick to return to the main menu.



A Current position of the cart [1]

Time remaining to the end of the track [2]

Number of currently taken shots /number of shots to capture [3]

2.2.4 ANIMATION

ANIMATION allows to program track of the cart during which the drive take series of photos (the drive will trigger the shutter release itself through a cable connected to the camera). After entering ANIMATION program set the individual parameters:

Direction – direction in which the cart moves: right/ left

HomePos – home position (measured in mm). Position determined by the user from which the drive should start its work. Home position can be determined in any place on the rail (within the range of calibration)

Step – length of step (measured in mm)

Steps – number of steps. Controller calculates the maximum amount of steps basing on home position (HomePos) and selected direction of movement.

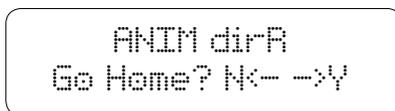
Shots – number of shots to take after the cart stops

Delay – time of the delay. Time after the cart stops before the drive triggers the shutter (0-9s)

[Start] – ANIMATION program starts

<Back> – controller returns to main menu

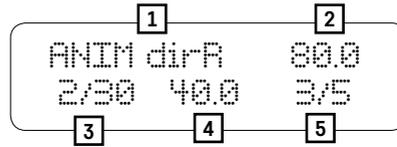
When you select [Start] in **ANIMATION** program there will be a message displayed on the screen: „Go Home?“. The controller requires the user decision whether the cart should start the movement from determined HomePos (→ Y) or whether to start the movement from the current position of the cart (N ←). Select the option by moving the joystick in the appropriate direction. DirR on the screen indicates the selected direction of the movement, in that particular example: right. You can return to the main menu at any time by pressing the joystick.



IMPORTANT!

Please note that it is important to select a proper direction of the movement in ANIMATION program. If you choose movement direction as left and the cart will be located in the left reference point „0“, the device will encounter resistance as it is the end of its movement range. Consequently, the drive will not move.

After the user determines the desired starting position, information about current parameters will appear on the LCD. In order to start, move the joystick in a direction you selected earlier. After the first step, move the joystick again to initiate another steps. The user can freely move a step forward or backward (by moving the joystick right or left) or skip a few steps forward or backward (by holding the joystick longer in a selected direction).



Selected movement direction [1]

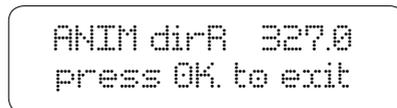
Current position of the cart [2]

Current step/ number of programed steps [3]

Length of step [4]

Number of shots already taken / number of all shots to take [5]

Sample screen presented above informs that the user selected right as movement direction [1]. If the user chose left, there would be: dirL- on the screen. Current position of the cart is 80mm [2] from the left reference point in AUTO or MAN mode, or starting point in **FREE Mode**. Length of step set by the user is 40mm [4]. The drive currently performs second step out of thirty steps set [3]. The drive has already taken three shots out of five shots set [5]. The user can stop the program at any time by pressing the joystick. When the drive has taken all the photos and stops the program there will be a message on the screen with the current position of the cart. Press the joystick to return to the main menu.



3. Terms of warranty

All Slidekamera products are covered manufacturer's warranty for a period of 12 months from the date of sale. Warranty covers any design faults or of the material of the product which resulted in the product malfunctioning. The warranty covers the repair, or, if the repair proves impossible, replacement of the product with a new one. However, the cost of repair of the product cannot overrun the catalogue value of the product. The warranty does not cover damage and / or product defects resulting from the improper usage, as well as not following product maintenance specifications.

The warranty excludes:

- unauthorized attempts to repair or modify
- mechanical damage caused during transport and operation of such features as scratches, dents, pits, dirt, etc ...
- flooding, moisture

To obtain warranty service the purchaser should deliver the damaged product together with a proof of purchase and proof of payment (invoice, cash register receipt). The product will be accepted for warranty service on condition that it is delivered with correctly filled in complaint form and properly protected during transport. You can download the complaint from: www.slidekamera.com.

After the warranty period is exceeded any spare parts can be purchased directly from the manufacturer or in any selected points of sale.

IMPORTANT!

PLEASE NOTE: Any package sent at the expense of HET-CNC s.c., 80-175 Gdańsk, Ul. Kartuska 386 will not be received

IMPORTANT INFORMATION FOR CORRECT DISPOSAL OF THE PRODUCT IN ACCORDANCE WITH EC DIRECTIVE 2002/96/EC



At the end of its working life, the product must not be disposed of as urban waste. It must be taken to a special local authority differentiated waste collection centre or to a dealer providing this service. Disposing of electronic equipment separately avoids possible negative consequences for the environment and health deriving from inappropriate disposal and enables the constituent materials to be recovered to obtain significant savings in energy and resources. As a reminder of the obligation to dispose of electronic equipment separately, the product is marked with a crossed-out wheeled dustbin.

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